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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,045	08/21/2003	Steven Don Arnold	H0004513	1705

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EXAMINER

WOLFE JR, WILLIS RAY

ART UNIT	PAPER NUMBER
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3747

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/647,045

Applicant(s)

ARNOLD, STEVEN DON

Examiner

Willis R. Wolfe, Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413) *<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)              |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/21/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Hitomi et al. Note Figure 6 showing turbocharger (57), high pressure EGR passage (21), low pressure EGR passage (23), intercooler (51) in intake passage (5), speed sensor (42), load sensor (41) and ECU (40) for controlling EGR valves (22) and (24).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hitomi et al in view of Grandin. Hitomi et al discloses the claimed invention except for the utilization of an EGR cooler in the high-pressure passage. Grandin teaches that it is known to provide an EGR cooler (17) in a high pressure EGR passage (15) as shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the high pressure EGR passage of Hitomi et al by providing an EGR cooler as taught by Grandin in order to lower the mixture temperature of the intake charge in the intake manifold.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitomi et al in view of Waszkiewicz et al. Hitomi et al discloses the claimed invention except for the utilization of a variable geometry turbocharger and an EGR/air mixer. Waszkiewicz et al teaches that it is known to provide a variable geometry turbocharger and an EGR/air mixer (42) as shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the EGR system of Hitomi et al by providing a variable geometry turbocharger and an EGR/air mixer as taught by Waszkiewicz in order to provide for better control over the engine's efficiency.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hitomi et al in view of Khair et al. Hitomi et al discloses the claimed invention except for the utilization of an emission controller in the exhaust passage between the output of

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the turbine and the inlet of the low pressure EGR passage. Khair et al teaches that it is known to provide an emission controller (22) in the exhaust passage between the output of the turbine (40) and the inlet of the low pressure EGR passage as shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the exhaust passage of Hitomi et al by providing an emission controller in the exhaust passage between the output of the turbine and the inlet of the low pressure EGR passage as taught by Khair et al in order to lower the emissions of the engine.

### ***Conclusion***


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references of Dinger et al, Khair and Gray et al are cited to show turbocharged engines with EGR passages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willis R. Wolfe, Jr. whose telephone number is (703) 308-1950. The examiner can normally be reached on Tuesday, Wednesday and Friday (4:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Willis R. Wolfe, Jr.  
Primary Examiner  
Art Unit 3747

WRW  
September 3, 2004